
State of Repair

The state of repair of freeways, local roadways and transit affects travelers in two respects. The more obvious impact is on the quality of travel. The second impact, which is not directly reflected in the indicators in this report, relates to cost. When roadways and transit vehicles are allowed to fall into disrepair, it usually ends up costing more to repair them than it would have cost to perform routine maintenance — just as deferring maintenance on a house often results in a more expensive repair.

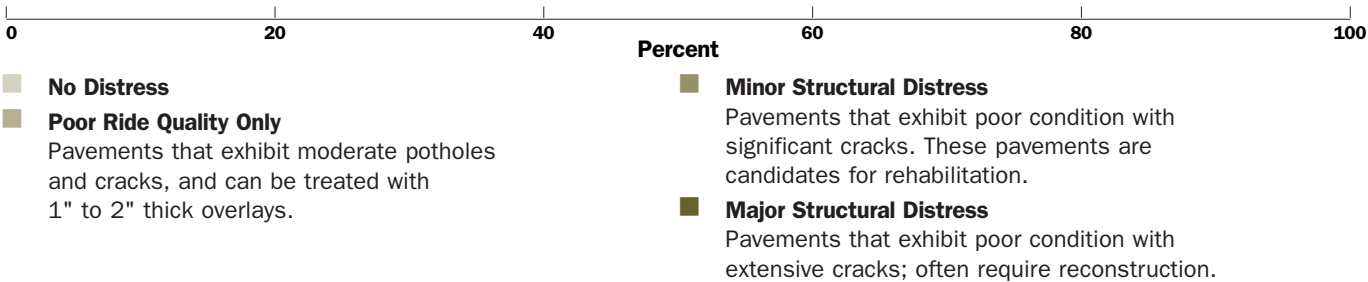
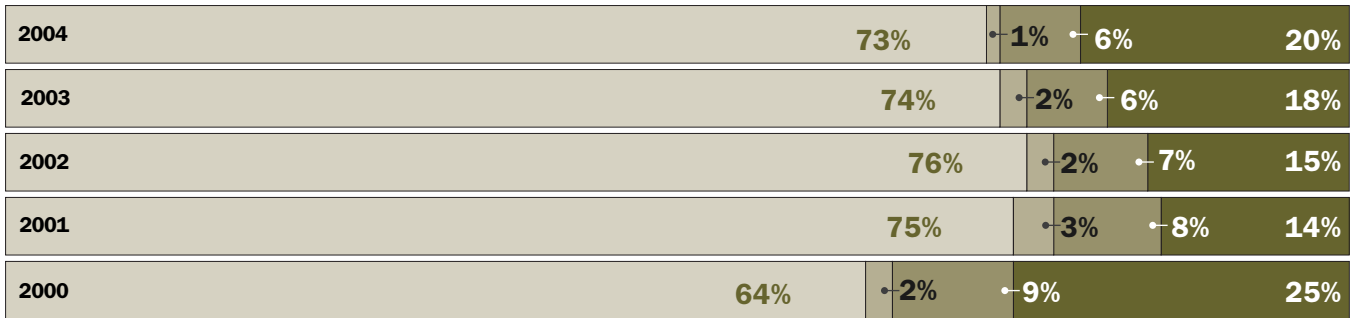
For freeways and local roadways, pavement condition is used as an indication of the state of repair. The condition of the transit system is measured by the average distance vehicles are driven between vehicle breakdowns that cause a disruption in service; the unscheduled repairs are known as service breakdowns.

Slight Slippage in State Highway Pavement Conditions, But Five-Year Comparison Is Favorable

- The pavement condition on state highways in the Bay Area slipped slightly in 2004, as the share of roads with no distress dropped a notch to 73 percent (from 74 percent), and the share with major distresses increased to 20 percent (from 18 percent).
- While the data suggest that we are still well ahead of where we were in 2000, roadway conditions have slid since 2001, when 75 percent of roads were considered to have no distress and just 14 percent had major distresses.

Note:
State-owned roadways are commonly called state highways and include freeways, rural highways (such as Route 1 along the Pacific Coast, Route 29 in Napa and Route 116 in Sonoma) and state-owned urban and suburban arterials (such as San Pablo Avenue in Alameda and Contra Costa counties and Skyline Boulevard in San Mateo County). There are 1,370 miles of state-owned roads in the Bay Area.

Pavement Conditions for State Highways in the Bay Area, 2000–2004



Source: Caltrans
Includes state-owned freeways and non-freeway roadways. Excludes state-owned bridges.
Total Bay Area lane miles in 2000 was 5,920. Total in 2001, 2002, and 2003 was 5,960. Total in 2004 was 5,980.

- In fiscal year 2000-01, the state boosted outlays to repair damaged roads and perform preventive maintenance. Since then, state investment in pavement maintenance has not kept pace with repair and preventive maintenance needs.
- Despite the recent signs of slippage, the state clearly has made progress in repairing the most severely damaged roadways. The share of roads with major structural distress was at 20 percent in 2004, matching last year's low and down from 25 percent in 2000.

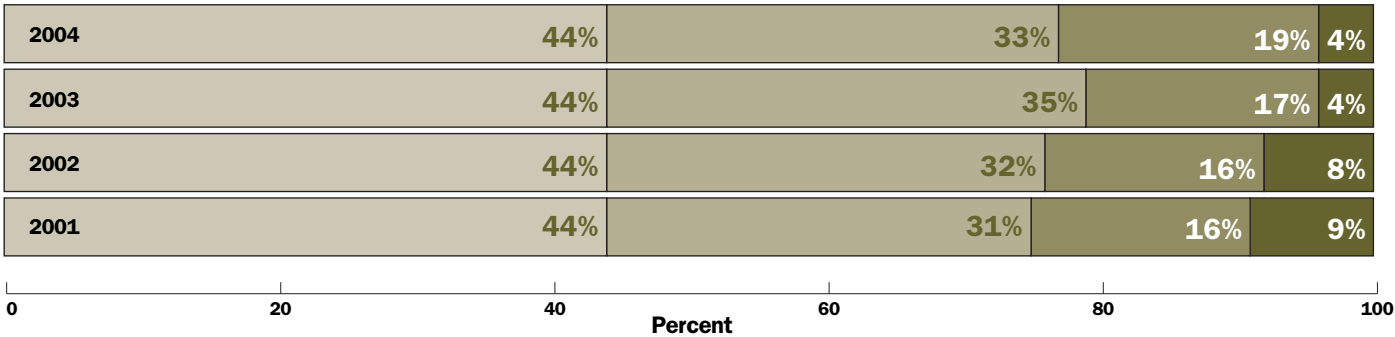
Bay Area Roadways a Trifle Bumpier in 2004; Regional Index at Four-Year Low

- The ride got a wee bit rougher on the Bay Area’s 19,000 miles of local streets and roads in 2004, as the average pavement condition index (PCI) dropped a point to 62 (out of a maximum possible 100 points). This continues a slow slide in the region’s PCI rating, which has fallen four points in as many years. In 2001, the PCI average was 66; this fell to 65 in 2002, 63 in 2003, and then to this year’s low of 62.
- There was no change in the share of pavements rated

“very good” or “excellent,” but the share of pavements rated “poor” or “very poor” increased by 2 percent and the share rated “good” or “fair” decreased 2 percent. The shift is small in percentage terms, but it is significant enough to tip the regional average downward — and ever closer to the dividing line between the “good” and “fair” categories.

- The trend suggests Bay Area jurisdictions are not spending the money necessary to maintain the condition of

Pavement Conditions for Local Roadways, 2001–2004 (total pavement miles)



■ **Excellent (PCI = 90–100) or Very Good (PCI = 75–89)**
Pavements that have no distress and require mostly preventive maintenance

■ **Good (PCI = 60–74) or Fair (PCI = 45–59)**
Pavements in this middle range offer acceptable ride quality, though road surfaces are becoming worn to the point where rehabilitation is needed to prevent rapid deterioration.

■ **Poor (PCI = 25–44) or Very Poor (PCI = 0–24)**
Pavements that have extensive amounts of distress and require major rehabilitation or reconstruction

■ **No Data**

2004 Bay Area PCI = 62
The regional PCI score is an average of the scores of all participating jurisdictions, weighted by centerline miles.

Source: Metropolitan Transportation Commission
96 cities and nine counties reporting
PCI = pavement condition index, a measure of pavement distress
57 of 105 jurisdictions provided updated databases to MTC for 2004. For other jurisdictions, MTC used its pavement management system software to project 2004 conditions based on the latest data available.

local roadway pavement over time. Tight city budgets — and the failure of the state to pass along road maintenance funds authorized by the voters in 2002 under Proposition 42 — have forced many cities into a “worst first” approach, in which only the streets in the worst condition are repaired and preventive maintenance is forgone. This approach is increasingly expensive over time, since the cost of major repairs is about five times that of routine maintenance. In 2005, the state finally did

pass along the Proposition 42 road maintenance funds, but these funds will have to continue to flow in subsequent years to make any significant dent in roadway maintenance needs.

- MTC estimates a cumulative backlog of \$2.9 billion for local street and road repairs in the Bay Area. This represents the cost of upgrading pavement to the point where it is cost-effective to maintain, typically when PCI scores fall in the range of 75 to 85.

A Closer Look – Cities with the best and worst average pavement conditions in 2004 are shown below. Often a jurisdiction’s low average pavement condition rating is the result of a roadway maintenance budget that is insufficient to cover a backlog of needs. The city of Dixon made its first appearance in the top 10 (since reporting began in 2001) and recorded the largest improvement in PCI, with an increase from 70 in 2003 to 84 in 2004. Gilroy (with a score of 82, up from 73 in 2003) also appeared in the top 10 for the first time in 2004. Larkspur and Half Moon Bay, which both ranked near the bottom in 2003, no longer appear in the bottom 10 in 2004. However, this is due less to improvement in pavement conditions than to the fact that other jurisdictions’ conditions deteriorated.

Bay Area Jurisdictions With Best and Worst Pavement Conditions, 2004

Best	2004 PCI ¹ (out of 100)	Worst	2004 PCI ¹ (out of 100)
1. Brentwood	87	95. Lafayette	54
2. Contra Costa County (unincorporated)	85	San Mateo	54
Los Altos	85	Vallejo	54
4. Dixon	84	98. Monte Sereno	53
Oakley	84	Rio Vista	53
Santa Clara	84	100. City of Napa	52
7. Belvedere	83	101. Marin County (unincorporated)	50
Sunnyvale	83	102. Colma	47
9. Gilroy	82	Richmond	47
10. Campbell	80	104. Orinda	46
		105. Sonoma County (unincorporated)	44

Source: Metropolitan Transportation Commission

105 of 109 jurisdictions reporting

¹ PCI = pavement condition index; PCI of 100 = Excellent

Appendix D:
**Pavement Condition of
Bay Area Jurisdictions, 2004**

Pavement Condition Index (PCI) for Bay Area Jurisdictions

2004 Average PCI	Jurisdiction	2003 Average PCI
Very Good		
87 ¹	Brentwood	82
85	Contra Costa County (unincorporated)	86
85	Los Altos	83
84	Dixon	70
84	Oakley	87
84	City of Santa Clara	86
83 ¹	Belvedere	82
83	Sunnyvale	84
82	Gilroy	73
80	Campbell	78
79	Concord	78
79	Dublin	81
79	Foster City	79
79	Livermore	75
79 ¹	City of Sonoma	74
78	Fairfield	80
78	Newark	76
76 ¹	American Canyon	77
76	Danville	75
76	Hercules	66
76 ¹	Mountain View	75
75	Vacaville	73
Good		
74	Corte Madera	65
74 ¹	Los Altos Hills	71
74	Redwood City	74
74	San Ramon	74
73	Pleasanton	65
72 ¹	Pinole	75
72 ¹	Windsor	76
71 ¹	Atherton	68
71	Benicia	70
71	Fremont	72

2004 Average PCI	Jurisdiction	2003 Average PCI
Good		
71	Rohnert Park	69
70	Antioch	72
70	Milpitas	69
70	Pacifica	72
70 ¹	Yountville	66
69	Brisbane	69
69	Cotati	68
69 ¹	Daly City	70
69	Santa Clara County (unincorporated)	73
69	Saratoga	65
68	Clayton	70
68	Cupertino	70
68	Sausalito	61
67 ¹	Berkeley	63
67	Burlingame	65
67	Cloverdale	67
67	Hayward	65
67 ¹	Los Gatos	69
67	Piedmont	67
67	Pittsburg	58
67	Sebastopol	58
66	Fairfax	58 ²
66	Healdsburg	66
66	Mill Valley	62
66	Portola Valley	68
66	San Pablo	64
65	City of Alameda	68
65 ¹	Morgan Hill	72 ²
64	Moraga	61
64 ¹	Novato	66
64	Petaluma	64
64 ¹	San Carlos	71
64	City and County of San Francisco	65 ²

Pavement Condition Index (PCI) for Bay Area Jurisdictions (continued)

2004 Average PCI	Jurisdiction	2003 Average PCI
Good		
64 ¹	San Jose	67
64	San Leandro	63
64 ¹	San Rafael	63
64	Santa Rosa	65
64	Woodside	64
63	Alameda County (unincorporated)	75
63	East Palo Alto	62
63	Hillsborough	50
63 ¹	South San Francisco	70
63 ¹	St. Helena	57
62 ¹	Ross	62
62	San Mateo County (unincorporated)	63
61	Albany	59
61	Belmont	62
61 ¹	El Cerrito	58
61	Millbrae	63
60	Menlo Park	58
60	San Anselmo	61
Fair		
59	Napa County (unincorporated)	59
59	Pleasant Hill	61
58	Martinez	61
58	Solano County (unincorporated)	60
58	Tiburon	61
57 ¹	San Bruno	64
56	Oakland	57 ²
55	Calistoga	63
55	Half Moon Bay	55
55 ¹	Larkspur	55
55 ¹	Suisun City	61
54	Lafayette	57 ²
54 ¹	San Mateo	55

2004 Average PCI	Jurisdiction	2003 Average PCI
Fair		
54	Vallejo	54
53	Monte Sereno	52
53 ¹	Rio Vista	60
52	City of Napa	55
50 ¹	Marin County (unincorporated)	53
47	Colma	50
47 ¹	Richmond	53
46	Orinda	74
Poor		
44 ¹	Sonoma County (unincorporated)	47
No Data		
NA	Emeryville	69
NA	Palo Alto	NA
NA	Union City	NA
NA	Walnut Creek	NA

Source: Metropolitan Transportation Commission

2004 PCI scores based on pavement databases updated in 2004 unless noted.

2003 PCI score is based on inspections between 1999 and 2003.

¹ PCI score is an estimate based on inspections done between 2001 and 2003. (See note on page 49.)

² Score has been correlated to the PCI scale from an alternate pavement management system.

NA = not available

Bus Reliability Improves While Rail Transit Slides; Long-Term Trend Is Positive

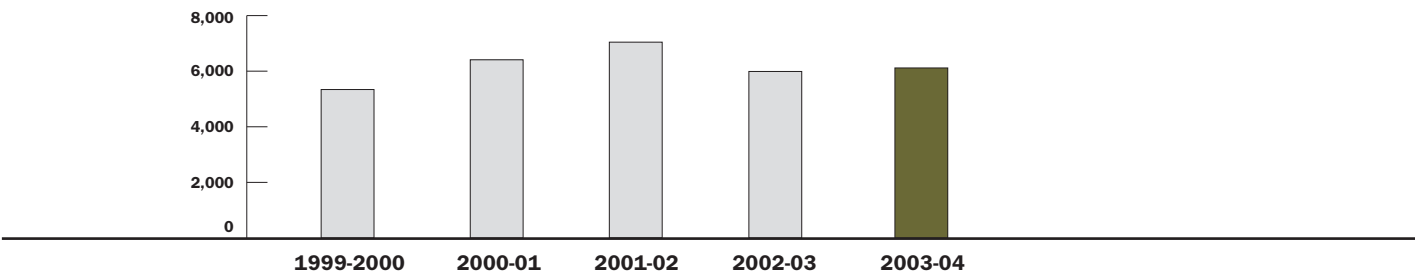
- The Bay Area’s largest bus operators improved a key measure of reliability in 2003-04, while the performance of the major rail transit operators worsened. The average distance traveled between service calls for buses increased 6 percent, to 6,130 miles. But the average distance between rail service calls decreased 16 percent, to 6,060 miles. A service call occurs when a bus or train requires repair and cannot complete scheduled service.
- These results are consistent with the general trend since

1999-2000. With the exception of 2002-03, the number of miles traveled between bus service calls has increased steadily, resulting in a cumulative 22 percent increase over the five-year period. On the other hand, the number of miles between rail service calls has decreased a cumulative 14 percent over the same timeframe.

- Because buses account for approximately 83 percent of regional transit service (measured in revenue service miles) while rail transit accounts for approximately

Service Calls — Six Largest Bay Area Transit Operators, Fiscal Years 1999-2000 – 2003-04

	Average Miles Between Service Calls					FY 2002-03– 2003-04	FY 1999-2000– 2003-04
	1999-2000	2000-01	2001-02	2002-03	2003-04		
Rail ¹	7,080	6,920	6,470	7,250	6,060	–16%	–14%
Bus ²	5,020	6,310	7,150	5,760	6,130	+6%	+22%
Rail and Bus ³	5,340	6,410	7,040	5,990	6,120	+2%	+15%



Source: Transit Operators

¹Includes BART, VTA light rail, Muni light rail

²Includes AC Transit, SamTrans, Muni, Valley Transportation Authority (VTA), Golden Gate Transit

³Combined “Rail and Bus” average is weighted by revenue vehicle miles of service.

Note: Reliability improves as the average number of miles between service calls increases

17 percent, the considerable improvements in bus performance more than counterbalance the decline in rail performance. As a result, the average miles between service calls for the bus and rail operators combined increased 2 percent between 2002-03 and 2003-04 and 15 percent over the longer time period from 1999-2000 to 2003-04.